

place in July, and in August the female fabricates a slender conical tube of silk of a very slight texture, measuring from one and a half to two and a half inches in length, and about half an inch in diameter at its lower extremity; it is closed above, open below, thickly covered externally with particles of indurated earth, small stones, and withered leaves and flowers, which are incorporated with it, and is suspended perpendicularly in the snare by lines attached to its sides and apex. In the upper part of this singular domicile the female constructs several globular cocoons of yellowish white silk of a slight texture, having a mean diameter of about $\frac{1}{8}$ th of an inch, in each of which she deposits from twenty to sixty small spherical eggs of a pale yellowish white colour, not agglutinated together. The young, after quitting the cocoons, remain a long time with the female and are provided by her with food, which consists chiefly of ants.

It would appear that M. Walckenaer, prior to the publication of the second volume of his 'Hist. Nat. des Insect. Apt.,' was not cognisant of my researches in this department of zoology, as in various instances he has adopted the names given by other arachnologists to spiders which I had previously described, without any reference to those assigned to them by me. I may refer to *Theridion riparium* as presenting a case in point.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

June 25, 1850.—Wm. Yarrell, Esq., Vice-President, in the Chair.

1. CATALOGUE OF THE MAMMALIA OF CEYLON. COLLECTED AND OBSERVED BY E. F. KELAART, M.D., F.L.S.

[Having already published a list of the Mammalia of the Island in our Number for May 1851, we merely give the descriptions of the new species indicated by the author.—ED. *Ann. Nat. Hist.*]

GOLUNDA NEWERA.

Fur soft, yellowish brown varied with black; chin and beneath yellowish grey; under-fur dark lead-colour; soft long hairs on the upper parts of the head and body, with longer black-tipped hairs having a subterminal yellowish band; fur of belly dark lead-colour tipped with yellowish grey; ears large, hairy on both sides, of a light rusty or ashy colour; whiskers slender, moderately long, some greyish, others blackish; tail shorter than the body, tapering to a point, scaly; upper surface of a black colour and covered with short semi-adpressed black hair; lower surface yellow or ashy colour, covered with short hair of the same yellow colour; feet having dark brown claws, purplish; four toes to the fore-feet, with a clawless rudimentary thumb; five hind-toes, three middle subequal; soles nearly bald, blackish; palma studded with four small tubercles; planta with six tubercles, the two foremost considerably larger; incisors yellow, superior ones

grooved in the centre; molars flat, deeply 3-lobed, tubercles rising in three distinct lines, middle larger than those of the sides, and the front one extending beyond the two other lobes.

Length of body and head, $3\frac{1}{4}$ inches; tail, $2\frac{1}{2}$.

This rat is found in the black soil of Newera Ellia, and is a great destroyer of peas and potatoes. The only two specimens I had, lived for some days in a cage and played like mice.

CORSIRA NEWERA ELLIA. (Or variety of *Corsira nigrescens*.)

Slaty or ashy black, very slightly washed with rufous on the upper parts; no trace of rufous beneath, which is paler slaty; whiskers long, very thin, greyish; legs from half way down the thighs covered with short adpressed hairs; feet fleshy grey; hair on the toes longer, and those of the hind-feet extending over the claws; claws white, those of the front feet elongated, compressed, acute; toes 5-5, all clawed; ears large, naked, partially hid in the fur; tail black, round, tapering, rather scaly, and thinly covered with short hair intermixed with much longer, glossy, shining, thin, stiff hairs, some of which are also seen in the upper parts and sides of the lower half of the body; teeth white throughout.

Length of body and head, $3\frac{1}{2}$ inches; tail, $2\frac{1}{2}$.

Found in Newera Ellia and even on Pedrotellgala, the highest mountain in Ceylon, which rises from the plains of Newera Ellia, and is 8020 feet above the sea's level. I had one quite docile in a box for some days, which fed ravenously on earth-worms; it used to run about the table and on my arms without attempting to get away; it died one frosty night.

This shrew differs from the *Sorex murinus* chiefly in the absence of all unpleasant smell. I could not trace any glands or lectæ in any part of the body. The elongated fore-claws is another good specific distinction. The *Sorex murinus* is also found here, and I am inclined to think that a very diminutive shrew, of which I have seen only one specimen, is another species, but which for the present I have considered as only the young of the above-described animal. It resembles in every point the *Sorex pygmaeus* of Hodgson (Mag. Nat. Hist. vol. xv.). There are several characters in our *Corsira* which make me consider it not identical with the *C. nigrescens* of Gray, especially the greater length of its tail than in the animal found on the continent of India, which I know only from Mr. Gray's description.

2. ON THE BLOOD-COLOURED EXUDATION FROM THE SKIN OF THE HIPPOPOTAMUS. BY JOHN TOMES, F.R.S.

The exudation is composed of a transparent fluid in which float two kinds of corpuscles; one kind is tolerably abundant, and is both transparent and colourless; the other is comparatively rare and of a bright red colour. To the solution of these latter bodies the fluid owes its peculiar colour.

The colourless corpuscles are spherical in shape, and vary in diameter from the 3450th to the 2100th of an inch; the majority however measure about the 3000th of an inch. Their structure is

granular, and in about the same degree as the colourless corpuscles of blood, and the ordinary exudation corpuscles, to which they present a strong resemblance.

Many of these bodies preserve their figure for a considerable time, while others become collected into clusters and form irregular broken masses.

The coloured corpuscles are irregular in size and shape, and are composed of an aggregation of minute elongated and sometimes triradiate bodies, many of which appear, from their irregular and obscure outline, as though partially dissolved. In the immediate neighbourhood of these, the fluid has a much deeper colour than elsewhere. From these circumstances I have been led to conclude that the general pink colour of the fluid is due to the solution of the coloured particles, and not simply to their presence. In this particular the fluid under consideration is strikingly different from blood, which owes its colour to the presence of coloured globules and not to their solution.

Whether the red colour of the exudation is a condition of youth, and of an imperfect condition of the skin, and has ceased in consequence of the increased age of the animal and the consequent more perfect development of the integument, or has ceased in consequence of the change of climate to which the animal has been lately subjected, is a question which, with the facts at present at our disposal, cannot be satisfactorily determined.

We have however sufficient evidence to warrant the conclusion, that the thick tenacious exudation, whether coloured or otherwise, is poured out only during the time the skin is immersed in water, and that it has an especial reference to the aquatic habits of the animal. It appears for the time to convert the surface of the body into a mucous membrane, and then, on the animal leaving the water, to furnish by its inspissation an epidermis.

Should further inquiry show that the thickness of the exudation arises from a solution of the colourless globules, its relation to mucus will be still further established, and a microscopic examination into the structure of the skin will become a subject of great physiological interest.

3. ON SIX NEW SPECIES OF HUMMING BIRDS.

BY JOHN GOULD, F.R.S. ETC.

Although the Trochilidæ have lately received much attention both from our own and the continental naturalists, the subject is far from exhausted, as is shown by the circumstance of my being able to bring before the notice of the Society this evening no less than six species hitherto uncharacterized and unknown. These great accessions to the family are all from a state with which we have as yet had but little intercourse—that of Veragua in Central America; and we are indebted for a knowledge of them to the researches of an enterprising traveller and botanist, M. Warzewicz, who has just returned from that country, where he successfully explored many forests and other districts not previously trodden by the foot of civilized man. Unfortunately, both for myself and for science, he was not able, in consequence of the

heavy rains which prevailed at the time, to procure or to preserve the examples in so fine a state as could be wished; although much mutilated and otherwise damaged, they are, however, sufficiently perfect to admit of my furnishing the following descriptions:—

1. TROCHILUS (SELOSPHORUS) SCINTILLA.

Male: upper surface bronzy green; on the throat a gorget of glittering fiery red, the feathers of which are much produced on either side; beneath the gorget a band of buffy white; wings purple-brown; central tail-feathers brownish black, margined with rusty red; lateral tail-feathers brownish black on their outer and rusty red on their inner webs; under surface reddish brown; bill black.

Female: upper surface as in the male, but not so bright; under surface white; throat-feathers less produced, and spotted with brown on a white ground; flanks buff; tail rufous, crossed by a crescentic bar of black near the tip.

Total length of the male, $2\frac{3}{4}$ inches; bill, $\frac{1}{2}$; wing, $1\frac{1}{4}$; tail, 1.

Hab. Volcano of Chiriqui, at an altitude of 9000 feet.

This is an extremely beautiful species, and forms a miniature representative of the *Trochilus rufus*, to which it is somewhat allied.

2. TROCHILUS (THAUMATIAS ?) CHIONURA.

Male: upper surface very dark grass-green; wings purplish brown; central tail-feathers bronzy green; lateral tail-feathers white, largely tipped with black; throat pale shining green; flanks greenish; centre of the abdomen and under tail-coverts white; upper mandible black, base of the lower mandible fleshy white.

Female: upper surface as in the male, but paler; lateral tail-feathers white, as in the male, but crossed near the extremity with an oblique band, instead of being tipped with black; throat and under surface generally white.

Total length, $3\frac{1}{2}$ inches; bill, $\frac{5}{8}$; wing, $2\frac{1}{8}$; tail, $1\frac{1}{4}$.

Hab. Chiriqui near David, province of Veragua, at an altitude of from 2000 to 3000 feet.

This is a remarkable species, differing, as it does, from all other Humming-Birds with which I am acquainted, in the large amount of white on the tail-feathers, which shows very conspicuously when that organ is spread. In form it is very similar to the *T. brevirostris* and *T. longirostris* of the Brazils.

3. TROCHILUS (THALURANIA) VENUSTA.

The entire crown, back of the neck, and upper part of the back, shoulders, abdomen, and under tail-coverts, beautiful shining ultramarine blue; throat and fore-part of the neck rich metallic green; wings purplish black; tail considerably forked, and of a blackish blue; bill black.

Total length, 4 inches; bill, $\frac{7}{8}$; wing, $2\frac{1}{8}$; tail, $1\frac{3}{4}$.

Hab. Volcano of Chiriqui in Veragua.

Remark.—Nearly allied to, and of the same form and size as, the *T. furcatus*, but a far finer bird.

4. TROCHILUS (— ?) CÆRULEOGULARIS.

Male: upper surface, shoulders, abdomen and under tail-coverts,

shining grass-green; throat, sides of the neck and chest, rich violet-blue; wings purple-brown; tail rather forked; central feathers bronzy green; lateral feathers purplish black; upper mandible and tip of the lower black; basal portion of the latter fleshy white.

Female: upper surface shining grass-green, but of a paler hue than in the male; tail as in the opposite sex, except that the lateral feathers are tipped with white; centre of the throat, abdomen and under tail-coverts white.

Total length, $3\frac{3}{4}$ inches; bill, $\frac{3}{4}$; wing, 2; tail, $1\frac{1}{2}$.

Hab. Near David, on the north side of the Cordillera, Veragua.

I am also indebted to Dr. T. B. Wilson of Philadelphia for the loan of a specimen from Panama. This species is precisely of the same elegant form as the *T. Goudotii*, but is of a larger size, and is at once distinguished from that bird by its blue breast.

5. TROCHILUS (—?) CASTANEOVENTRIS.

Crown of the head metallic green; upper surface green; wings purplish brown; tail dark bronzy green, crossed near the tip by a broad band of black; the lateral feathers tipped with buff, which decreases in extent as the feathers approach the central ones; all the under surface reddish chestnut; bill black.

Total length, 4 inches; bill, $\frac{7}{8}$; wing, $2\frac{1}{4}$; tail, $1\frac{3}{8}$.

Hab. Cordillera of Chiriqui, at an altitude of 6000 feet.

Remark.—This is a moderately sized species, and is not allied to any other member of the family with which I am acquainted; I am therefore unable to assign it a place in any of the sections hitherto proposed; the specimens I possess appear to be immature, and are unfortunately in bad condition.

6. TROCHILUS (—?) NIVEOVENTER.

Crown of the head and back of the neck bronzy green; back rich coppery bronze; wings purple-brown; upper tail-coverts reddish purple; tail purple-black; throat resplendent green; abdomen snow-white; flanks green; under tail-coverts greenish brown, margined with white; bill black, except the basal three-fourths of the lower mandible, which are flesh colour.

Total length, $3\frac{3}{4}$ inches; bill, $\frac{7}{8}$; wing, $2\frac{1}{8}$; tail, $1\frac{1}{4}$.

Hab. Near David; warm countries of Veragua.

Remark.—Nearly allied to *T. Edwardi* and *T. erythronotus*; from the former, however, it differs in the colour of the tail, and from the latter in the white colouring of the breast.

BOTANICAL SOCIETY OF EDINBURGH.

Thursday, 19th June.—Professor Balfour, President, in the Chair.

A copy of the new edition of the Society's Catalogue of British Plants was laid on the table.

Mr. Henry Paul presented a specimen of *Codium Bursa*, collected in the neighbourhood of Brighton.

Dr. Balfour exhibited specimens of *Bryum Wahlenbergii* from Arniston, near Edinburgh, where they were collected by Mr. Veitch,